

PATENT APPLICATION  
DOCKET NO.: 10015052-1

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JUN 24 2004

AMENDMENTS TO THE SPECIFICATION

Please replace Paragraph [0001] with the following amended paragraph:

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[0001] This application discloses subject matter related to the subject matter disclosed in the following commonly owned co-pending patent application(s): (i) "Stack Utilization Management System And Method For A Two-Stack Arrangement," filed even date herewith, Application No.: 09/973,665 (Docket Number 100110141-1) Ser. No.: ~~(Docket Number 100110141-1)~~, in the name(s) of: Dan Tormey, Joe Bolding and Gerald Everett.

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Please replace Paragraph [0007] with the following amended paragraph:

[0007] ~~Accordingly, the present invention advantageously~~ In one embodiment, provides a system and method is disclosed for managing stack utilization with particular reference to single-stack arrangements in a ~~high performance~~ computing environment such as, for example, architectural simulators for multiprocessor (MP) platforms, specific hardware implementations having known or heretofore unknown computer architectures, and the like, ~~that overcomes these and other aforementioned deficiencies of the state of the art solutions.~~ An application programming interface (API) is provided for facilitating user interaction with a stack management system associated with the computing environment, whereby an exemplary unidirectional single stack is initialized with respect to a fixed stack marker boundary, a stack base and a stack pointer. A high water mark is maintained for tracking the stack pointer's farthest location from the stack base attained during the execution of a program. When a program instruction is operable to access a stack location, one or more validity rules are applied to determine if the access operation is permissible. Where the program instruction is operable to modify the stack pointer,

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another set of validity rules are applied to determine if the stack pointer operation is permissible. User warning and optional return of program control are available when an invalid access operation or stack pointer operation is attempted.